

REMARKS/ARGUMENTS

The Office Action dated September 25, 2007 has been carefully considered. Claims 1-20 are pending in the present application with claims 1 and 11 being in independent form. A copy of the claims indicating the present status of each is attached hereto for the convenience of the Examiner.

Applicant appreciates the Examiner's indication that prosecution has been reopened in light of Applicant's Appeal Brief dated June 25, 2007.

Claims 1, 2, 5-10, 16 and 17 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Huber '978 and the 1999 Publication of Basic Rotational Quantities (hereinafter "BRQ"). Reconsideration of this rejection is respectfully requested.

The Examiner substantially repeats the substance of the rejection included in the final Office Action of September 8, 2006 with regard to Huber '978. The Examiner notes that the limitation "the specific element being adapted to allow elastic rotation between the first and second driveline portions when driving torque is being transmitted to the driveline" is a preamble and has not been given patentable weight. The Examiner then proceeds to admit at page 7 of the Office Action that Huber '978 does not disclose that the first sensor is operable to detect a position of the first portion of the driveline, that the second sensor is operable to detect a position of the second portion of the driveline or that the control unit is operable to store at least one measured value which is related to a reference angle between the position of the first portion and the position of the second portion when the gear is engaged in the gearbox, and is operable to initiate a control action so that the angle and a prevailing angle between the first portion and the second portion are substantially equalized before the gear is disengaged. That is, the Examiner appears to concede that Huber '978 fails to disclose all of the remaining features of claim 1.

The Examiner argues, however, that BRQ teaches the relationship between angular position, the time, angular velocity and angular acceleration. The Examiner concludes that it would have been obvious to one of ordinary skill in the art that the sensors 40 and 42 of Huber '978 "must have detected the angular position of the first portion of the driveline and the second portion of the driveline, respectively, and further derived the angular velocity of the first portion of the driveline and the second portion of the driveline, respectively, in view of BRQ'1999

teaching, in order to effectively control the engaging and disengaging of the gear.” Applicant must strongly disagree.

As has been previously noted, several features in claims 1 and 11 of the present application are clearly new in relation to the disclosure of Huber ‘978. Indeed, as noted above, the Examiner would appear to admit as much. In addition, none of these features is disclosed in BRQ either.

As an initial matter, while the Examiner indicates that the recitation regarding the “specific element” in claim 1 is not entitled to patentable weight, it is noted that the Examiner makes no mention whatsoever of the “specific element” in claims 1 and 11 at all. The Examiner completely ignores this feature while at the same time going to great lengths in attempting to identify the features of Huber ‘978 that allegedly correspond to other features that would be in the preamble, in accordance with the Examiner’s characterization thereof. Thus, in light of the fact that the Examiner would appear to place patentable weight on these other “preamble” features, it is believed that the “specific element” should be accorded the same patentable weight.

Nonetheless, as has been explained before, none of the documents cited by the Examiner, including BRQ disclose or suggest “a control unit operable to store at least one measured value which is related to a reference angle (A_{REF}) between the position ($P_{1, REF}$) of the first portion and the position ($P_{2, REF}$) of the second portion when a gear is engaged in the gearbox, and is operable to initiate a control action so that said reference angle (A_{REF}) and a prevailing angle (A) between the first portion and the second portion are substantially equalized before the gear is disengaged.” The advantages afforded by such a control unit are thoroughly explained in the application as well as in Applicant’s previous responses.

Indeed, the Examiner specifically explains that elements 32 and 34 of Huber ‘978 “store at least one measured value related to speed information between the first driveline portion and the second driveline portion ... and is operable to initiate action so that the reference/preselected speed and prevailing speed... are substantially equalized before the gear is disengaged.” There is no mentioned whatsoever in Huber ‘978 of storing measured information regarding a reference angle between positions of the first and second driveline portions as is required by claim 1. Further, BRQ does not disclose any such control unit either.

Furthermore, none of the references cited by the Examiner disclose or suggest “a first sensor operable to detect a position (P_1) of the first portion of the driveline and a second sensor operable to detect a position (P_2) of the second portion of the driveline.” In Huber, there is a sensor 40 for sensing the rotational speed of the engine output shaft 16 and a sensor 42 for sensing the rotational speed of the transmission input shaft 20. There is no arrangement for sensing the positions of these two shafts. BRQ further fails to disclose such sensors as well. The Examiner appears to contend that the equations of BRQ for determining angular velocity and acceleration somehow necessitate that the sensors 40 and 42 detect the position of the driveline portions. This is clearly not true.

As has been described previously, to sense the rotational speed of a shaft in typical automotive application, the shaft merely requires, for example, regularly distributed teeth or indicia on the periphery of the shaft. To sense the actual position of the shaft, in contrast, requires, again as only one example, teeth that are, at least at one place, unevenly distributed on the shaft. The arrangements disclosed in Huber ‘978 only needs the speeds of the shafts, not their positions (especially not their positions relative to each other), and there is therefore no incentive or suggestion and certainly no necessity, for a person skilled in the art to modify the shafts or the sensors and/or to provide a means to also enable the sensors to sense the position of the shafts. Indeed, the Huber ‘978 reference teaches away from such a modification since the system only requires speed monitoring and such speed monitoring can be done in a much simpler manner than that suggested by the Examiner. BRQ certainly does not disclose any such sensors either. Therefore, Huber ‘978 and BRQ neither disclose nor even suggest an arrangement wherein the positions of the shafts are sensed by the sensors 40 and 42.

Accordingly, it is respectfully submitted that claim 1, and the claims depending therefrom, are patentable over the cited art for at least the reasons described above.

Claims 1, 2 and 5-20 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Huber ‘978 in view of applicants admission of prior art at page 4, lines 2-3 of the specification and BRQ. Reconsideration of this rejection is respectfully requested.

The rejection of claims 1, 2 and 5-20 is substantially similar to that of claims 1, 2, 5-10, 16 and 17 described above. With regard to the “specific element” of claim 1, the Examiner

further argues that the present specification at page 4, lines 2-3 discloses that conventional clutches allow elastic rotation between the first and second driveline portions.

As noted above, neither Huber '978 nor BRQ show or suggest the patentable features of claim 1 described. Similar patentable features are recited in independent claim 11. Further, page 4, lines 2-3 of the present specification merely suggest that conventional clutches allow elastic rotation relative to the driving torque transmitted. There is no specific disclosure of the specific element of claims 1 or 11.

Accordingly, it is respectfully submitted that claims 1 and 11, and the claimed depending therefrom, respectively, are patentable over the cited art for at least the reasons described above.

Claims 3-4 have been rejected over Huber '978 in view of the admitted prior art and BRQ and further in view of Tojima et al.

Claims 3-4 depend on claim 1. As is noted above, claim 1 is believed to be patentable over the combination of Huber '978, the admitted prior art and BRQ. Nothing in Tojima et al. supplements Huber '978, the admitted prior art, or BRQ so as to support a rejection of claims 1 and 11 and their dependent claims.

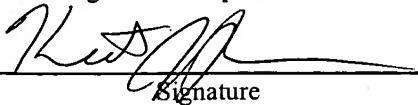
A person skilled in the art would not have any idea of constructing an arrangement according to any of claims 1-20 in the light of what is known from any of the documents. The invention according to the claims therefore clearly involves an inventive step.

Favorable reconsideration is respectfully requested.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 25, 2008:

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Name of applicant, assignee or
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Signature

March 25, 2008

Date of Signature

Respectfully submitted,



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